

U.S. Patent Application Serial No. **09/337,278**
Amendment filed August 20, 2004
Reply to OA dated April 20, 2004

REMARKS

Claims 1, 5, 10 and 20-22 are pending in this application. Claims 3, 7, 9, and 11-19 have been canceled without prejudice or disclaimer, claims 1, 5 and 10 have been amended, and add new claims 20-22 have been added. It is believed that this Amendment is fully responsive to the Office Action dated **April 20, 2004**.

An interview was conducted between Applicant's agent, Daniel A. Geselowitz and Examiner Winter, on August 11, 2004. In the interview, the Examiner indicated that base claim 1 would be allowable if it were clarified that water and carbon dioxide are the only components of relevance in the cleaning solution, and if the limitation of claim 3, that the sponge member is separated from the object to be cleaned and that the same cleaning solution is supplied to the separated sponge member, was incorporated into claim 1. The Examiner also indicated that the function achieved by the limitation of claim 3 should be clarified by a "wherein" clause.

Applicant has therefore amended the claims as discussed in the interview. In the amendment to claim 1, "water containing carbon dioxide gas" is amended to "a solution consisting essentially of water and carbon dioxide." The limitation of claim 3 is added to claim 1, along with the phrase "wherein contaminants are removed from the sponge member." The limitation that the electronic component must be alumina titanium carbide is removed. Claims 3 and 7 are correspondingly canceled.

U.S. Patent Application Serial No. 09/337,278
Amendment filed August 20, 2004
Reply to OA dated April 20, 2004

Applicant submits that the recitation of “solution consisting essentially of water and carbon dioxide,” although not explicitly used in the specification, is supported by the specification. On page 5, bottom paragraph, for example, the preparation of the cleaning water 30 is described as involving supplying of carbon dioxide gas to superpure water, and it is evident that there are no other components in the cleaning water.

Applicants have also added new claims 20-22, dependent from claim 1. Support for the limitation of an “alumina titanium carbide” component in claim 20 has been discussed in the previous Amendment. Support for the recitation that the resistivity value is “0.5 MΩ or less” in claim 21, and “0.3 MΩ or less” in claim 22, may be found in the data in Fig. 4 of the specification, as discussed on page 11, last paragraph, and on page 10, last paragraph.

Applicants summarize below how the amendments distinguish from the cited references.

Claims 1 and 5 are rejected under 35 U.S.C. §103(a) as being unpatentable over Miyashita U.S. Patent No. 6,167,583, in view of Kanno, U.S. Patent No. 5,873,380 further in view of United States Patent No. 5,741,403 to Tenhover et al. (Office action paragraphs no. 2-8)

Claims 3, 7 and 8 are rejected under 35 U.S.C. §103(a) as being unpatentable over Miyashita in view of Kanno, further in view of Tenhover, as applied to claims 1 and 5 above, and further in view of Simmons et al., U.S. Patent No. 5,693,148. (Office action paragraphs no. 9-11)

U.S. Patent Application Serial No. 09/337,278
Amendment filed August 20, 2004
Reply to OA dated April 20, 2004

Claims 3 and 7 are rejected under 35 U.S.C. §103(a) as being unpatentable over Miyashita, in view of Kanno, and Takehiko as applied to claims 1 and 5 above, further in view of Simmons et al., U.S. Patent No. 5,693,148. (Office action paragraphs no. 12-14)

The rejections of pending claims 1 and 5 are overcome by the amendments to the claims. As amended, claim 1 now recites use of a “solution consisting essentially of water and carbon dioxide.” This replaces the recitation “water containing carbon dioxide gas,” which the Examiner has noted might read on water with other components. Of the cited references, only Kanno appears to discuss adding carbon dioxide (column 7, line 17), but this is as a **foaming gas**, not for adjustment of resistivity. Miyashita is cited for disclosure of **high purity** water having a resistivity of 5 MΩcm to 18 MΩcm (column 1, lines 22-23). However, claim 1 requires resistivity less than 5 MΩ. Miyashita’s disclosure of “high purity” water clearly refers to “high resistivity” and would not suggest lower resistivities.

Moreover, the limitation of claim 3, requiring that the **same** solution used to clean the object be used to rinse the separated sponge, has been added to claim 1. Simmons, in column 3, lines 9-10, and column 4, lines 3-6, was cited for disclosing separating the sponge member and supplying cleaning water to the sponge member. However, as may be seen in the abstract, and in particular in column 3, lines 50-63, the brush in Simmons is treated with a **basic** solution, in particular an ammonium hydroxide solution, to raise the pH. This is not the same as the solution used in the cleaning process, and of course, is not a solution consisting essentially of water and carbon dioxide.

U.S. Patent Application Serial No. 09/337,278
Amendment filed August 20, 2004
Reply to OA dated April 20, 2004

Applicants therefore assert that claims 1 and 5, as amended, as well as dependent claims 10 and 20-22, are novel and non-obvious over the cited references, taken separately or in combination.

Claims 9 and 10 are rejected under 35 U.S.C. §103(a) as being unpatentable over Miyashita, in view of Kanno, Tenhover and Simmons as applied to claims 1, 3, 5 and 7 above, further in view of Chung et al., U.S. Patent No. 5,336,371. (Office action paragraphs no. 15-17)

Claims 9 and 10 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,336,371 to Chung et al., in view of Takehiko as applied to claims 1, 3, 5, and 7 above. (Office action paragraphs no. 18-19)

The rejection is moot in view of the cancellation of claims 9 without prejudice or disclaimer, and the amendment of claim 10 to remove the dependency from claim 9.

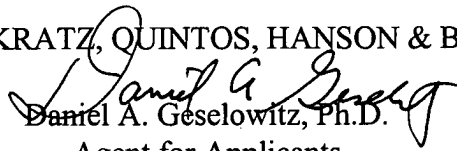
U.S. Patent Application Serial No. **09/337,278**
Amendment filed August 20, 2004
Reply to OA dated April 20, 2004

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP


Daniel A. Geselowitz, Ph.D.
Agent for Applicants
Reg. No. 42,573

DAG/plb
Atty. Docket No. **990659**
Suite 1000
1725 K Street, N.W.
Washington, D.C. 20006
(202) 659-2930



23850

PATENT TRADEMARK OFFICE